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MANITOBA FLOOD PROTECTION AGREEMENT
: ANNUAL REPORT 1986-1987
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Manitoba

# MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

## Annual Report

## 1987 - 1988

July 1988

Government of Canada | Gouvernement du Canada | Government of Manitoba | Gouvernement du Manitoba

CANADA - MANITOBA
AGREEMENT RESPECTING THE CONSTRUCTION OF FLOOD
PROTECTION PROJECTS IN MANITOBA

1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

August 17, 1988

The Honourable Tom McMillan
Minister
Department of the Environment
Ottawa, Ontario
K1A OH3

The Honourable Jack Penner
Minister
Department of Natural Resources
Winnipeg, Manitoba
R3C OV8

Dear Ministers:

I am pleased to present the sixth Annual Report of the Implementation Committee for the administration of the Canada-Manitoba Agreement Respecting the Construction of Flood Protection Projects in Manitoba. This report covers the work undertaken during the period April 1, 1987 to March 31, 1988.

During the year all the required works at Brunkild, Morris, St. Jean, Letellier and Rosenort were completed. Dyke upgrading at Emerson continued. Design of the flood protection projects at Ste. Rose and the Souris Water Treatment Plant was completed. The work at Ste. Rose du Lac was delayed due to an expropriation hearing followed by court action by some of the landowners. However, some construction material for the project was purchased.

Total expenditures to March 31, 1988 under the Agreement have totalled $3,790,000. During the reporting period shareable expenditures were $716,956. Of this amount 45 percent or $322,630 was Canada's share and 55 percent or $394,326 was Manitoba's share.

The Agreement expires on March 31, 1989, however, because of delays in obtaining approval to purchase the rights-of-way for the project at Ste. Rose du Lac and the delays in signing the agreement to construct the international segment of the Emerson-Noyes dyke the Committee will be requesting that the Agreement be extended to March 31, 1991 in order to complete the projects.

Yours sincerely,

L. J. Whitney, P. Eng.
Chairman, Implementation Committee

# CANADA-MANITOBA
# AGREEMENT RESPECTING FLOOD PROTECTION
# PROJECTS IN MANITOBA

## ANNUAL REPORT
## FOR
## THE PERIOD
## APRIL 1, 1987 TO MARCH 31, 1988


Environment Canada
Inland Waters Directorate
Western and Northern Region
1901 Victoria Avenue
Regina, Saskatchewan
S4P 3R4

Province of Manitoba
Department of Natural Resources
Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
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June, 1988

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1. Canada-Manitoba Agreement Respecting Flood Protection Projects - Expenditures for 1982-88


## APPENDICES


A. Location of Communities in the Canada-Manitoba Agreement Respecting Flood Protection Projects

B. Location Plans of the Flood Protection Projects

# MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

On March 10, 1983 the Government of Canada and Manitoba signed "An Agreement Respecting the Upgrading of Ring Dykes in Certain Communities in the Red River Valley." This Agreement provided for the upgrading of the existing dyking systems of eight communities in the Red River Valley to provide flood protection to the one percent flood level. The agreement was amended on May 22, 1985 to provide for additional funding of $1.6 million to include flood protection works for Ste. Rose du Lac and the Souris Water Treatment Plant. The title of the agreement was changed to reflect the inclusion of the communities of Ste. Rose du Lac and Souris which are not located in the Red River Valley. The termination date for the amended Canada-Manitoba Agreement Respecting Flood Protection Projects in Manitoba is March 31, 1989. Some of the projects under the Agreement will not be completed by March 31, 1988 and it is anticipated that a two year extention will be required. The extention is necessary due to court action associated with the expropriation of land which delayed the project at Ste. Rose du Lac, and delays in negotiating an agreement with the U.S. Corps of Engineers for construction of the international segment of the dyke at Emerson-Noyes.

## 1. Introduction

The sixth annual report reviews work activities and programs under the Canada-Manitoba Agreement Respecting Flood Protection Projects during the period from April 1, 1987 to March 31, 1988.

The Agreement provides up to $6.1 million to improve the existing ring dykes at Emerson, Letellier, Dominion City, St. Jean Baptiste, Morris, Rosenort, Brunkild, St. Adolphe, Ste. Rose du Lac and at the Souris Water Treatment Plant to protect against a one percent flood. The costs of the works undertaken under this agreement are shared 45

percent by Canada and 55 percent by Manitoba. Manitoba has instituted agreements with the eight municipalities in the Red River Valley to secure local cost-sharing which includes a contribution of five percent of the capital costs to upgrade the dyking systems from the 1950 flood level to the one percent flood level, and a contribution of 25 percent of the annual maintenance costs. In lieu of 25 percent of the annual maintenance costs the communities will be responsible for grass mowing as well as a fixed annual payment to the Province for pump replacement. Manitoba has also signed agreements with the Turtle River Conservation District for the works to be constructed at the Village of Ste. Rose du Lac and with the Town of Souris for contributions of five percent of the capital works and 25 percent of the annual maintenance costs.

The communities are shown on the location map in Appendix A. Location plans for the dyking systems are shown in Appendix B.

## 2. Organization

Under the terms of the Agreement an Implementation Committee was established consisting of one member appointed by the Minister of the Environment for Canada and one member appointed by the Minister of Natural Resources for Manitoba. On March 31, 1988 the Committee consisted of:

| Canada | Manitoba |
|---|---|
| Dr. R. D. Bjonback<br>Chief<br>Water Planning and Management<br>Western and Northern Region<br>Inland Waters Directorate<br>Environment Canada | Mr. L. Whitney<br>Chief of Water Management<br>Water Resources Branch<br>Department of Natural Resources |

In December, 1987 Dr. Bjonback replaced Mr. R. A. Halliday and Mr. Whitney replaced Mr. F. P. Barlisnen. Mr. G. Felton of Inland Waters Directorate, Environment Canada served as Secretary.

The Implementation Committee met on April 30, 1987 and March 24, 1988.

3. Progress

Significant progress had been made on the dyke upgrading for most communities prior to the 1987/88 fiscal year. All work except for the landscaping, and the installation of the emergency communication equipment had been completed at Brunkild, Rosemont, Morris, St. Jean, and Letellier. The existing dyke at St. Adolphe had been upgraded and some upgrading completed at Emerson. The storage/communication facility in Morris was completed.

The following is the detailed progress report on the communities for the 1987-88 fiscal year.

Emerson - The east section of the dyke from the C.P.R. tracks at the International Boundary north and west to the C.P.R. tracks at Saskatchewan Street was completed under contract. Additional right-of-way required to complete this section was also purchased. The United States Army Corps of Engineers has obtained authorization for the joint project of the Noyes Dyke and the dyke along the International Boundary Dyke with the cost of the International Boundary Dyke to be cost shared by Canada and Manitoba.

The latter dyke will be constructed by the Corps under an agreement with Manitoba. The agreement that will enable construction to proceed in 1988 is at an advanced stage of preparation.

Expenditures for the year were $129,477.36.

Letellier - The drive shaft for the right angle gear drive for the emergency operation of one of the pumps in the pumping station was purchased and installed. The installation of the emergency communication system was completed and the north closure dyke raised to the appropriate level. This completes the required works under the agreement.

Expenditures for the year were $6,322.20.

The total cost of the project was $509,498.64.

Dominion City - The only work undertaken was the cleaning up of the drainage improvements done the previous year.

Expenditures for the year were $2,773.19.

St. Jean Baptiste - The drive shafts for two right angle drives were purchased and installed. The emergency communication system was installed. Tree planting for erosion control was completed and the final right-of-way payments were made. This completes the required works under the agreement.

Expenditures for the year were $15,690.80.

The total cost of the project was $672,210.55.

Morris - The drive shafts for the right angle gear drives were purchased and installed. The installation of the emergency communication system was completed. The north closure dyke between the C.N.R. tracks and the C.P.R. tracks was raised. Tree planting for erosion control adjacent to the south and east dykes was completed. This completes the required works under the agreement.

Expenditures for the year were $28,186.65.

The total cost of the project was $454,349.60.

Rosenort - The drive shafts for the right angle gear drives were purchased and installed. Modification to the pumping station to accept the drive shafts were completed. The installation of the emergency communication system was completed. This completes the required works under the agreement.

Expenditures for the year were $6,675.69.

The total cost of the project was $271,677.31.

Brunkild - The drive shafts for the right angle gear drives were purchased and installed, and the necessary modifications to the pumping station were completed. The emergency communication system was completed. This completes the required works under the agreement.

Expenditures for the year were $5,471.38.

The total cost of the project was $538,200.70.

St. Adolphe - No works were undertaken during the 2987-88 fiscal year because project plans for the north segment of the dyke have not been finalized. St. Adolphe is located in the Rural Municipality of Ritchot and the municipality has requested that the north segment of the dyke be relocated to provide protection to additional. The Implementation Committee has agreed to this extension provided that the incremental costs are paid for by the landowners and are not charged to the Canada-Manitoba Agreement. The R.M. has had difficulty obtaining a commitment from the owners of the additional land to be protected to pay the additional construction costs. Expenditures during the 1987-88 fiscal year were for surveying services.

Expenditures for the year were $7,179.84.

Ste. Rose du Lac - No works were undertaken due to the delays in acquiring the right-of-way required for the project. The costs incurred during the fiscal year were for the legal

costs associated with the expropriation as well as for the emergency communication systems and construction materials.

The acquisition of right-of-way for the Ste. Rose du Lac flood protection scheme has met with some resistance. Because of the concerns experessed by landowners in the Rural Municipality of Ste. Rose du Lac, the Manitoba Minister of Natural Resources called for a Public Inquiry under the Manitoba Expropriation Act. The Inquiry was held during the week of September 14-18, 1987. The finding of the Inquiry Officer was that the taking of the land was fair and just. However, some of the objecting landowners appealed to the Court of Queen's Bench to have the project quashed. The court hearing was held on March 4, 1988 with no decision being handed down by the judge as of March 31, 1988.

Expenditures for the year were $497,215.16.

Souris Water Treatment Plant Dyke - No physical works were undertaken. The design of the required works was completed. The necessary right-of-way was purchased.

Expenditures for the year were $17,964.15.

Total Expenditures - Expenditures for the 1987-88 fiscal year totaled $716,956.42. Table 1 indicates expenditures under the agreement from 1982-88.

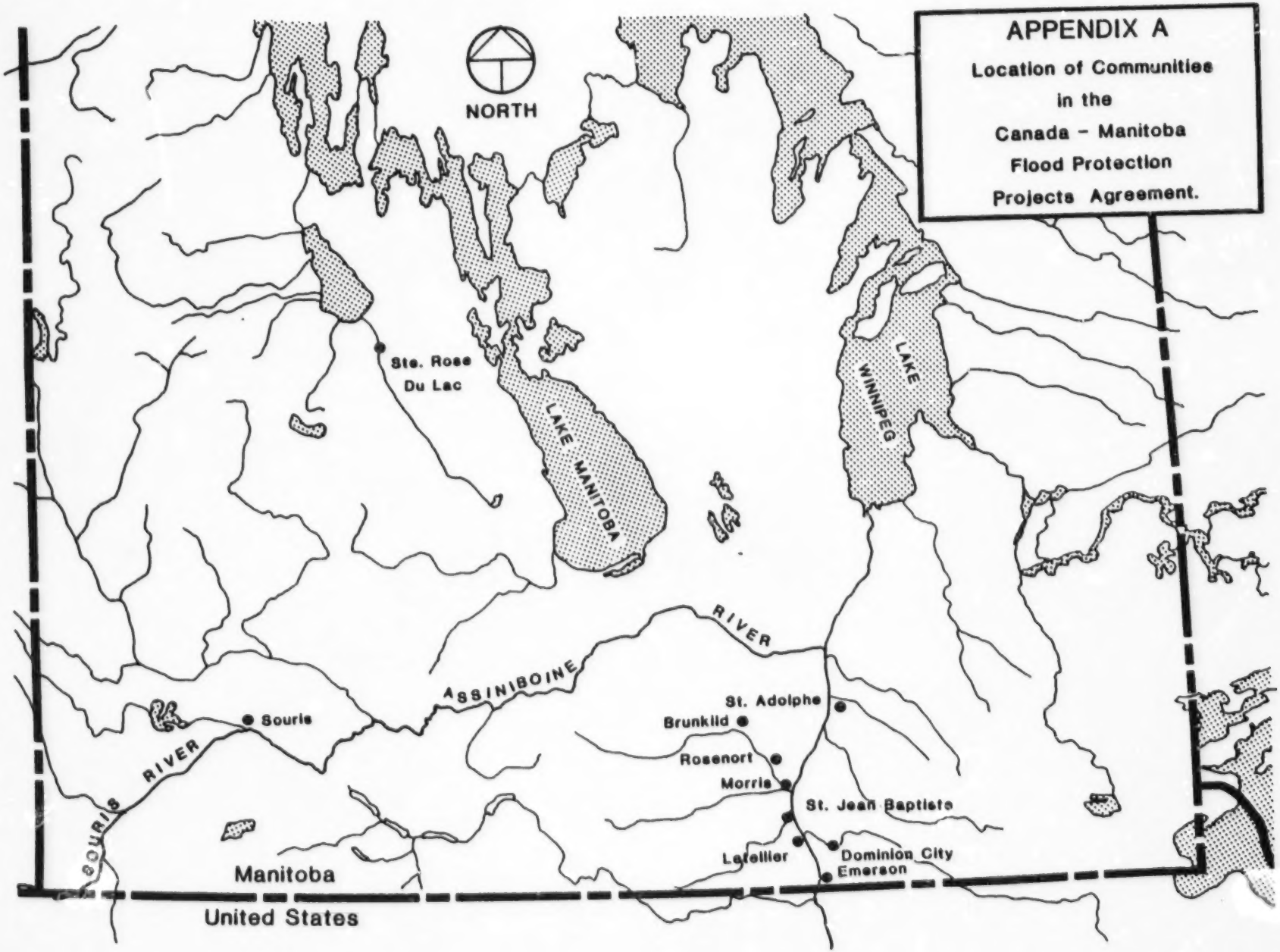
TABLE 1

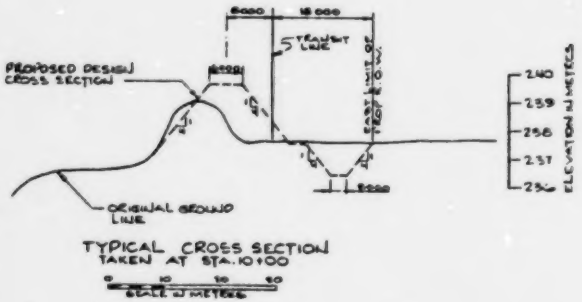
CANADA-MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT
EXPENDITURES FOR 1982-88

| Community | 1982/83* | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 | Accumulative Total |
|---|---|---|---|---|---|---|---|
| Emerson | - | $ 3,834.76 | $ 7,356.01 | $ 114,675.92 | $177,281.96 | $129,477.36 | $ 432,626.01 |
| Letellier** | - | 7,367.42 | 65,599.26 | 335,539.53 | 94,670.23 | 6,322.20 | 509,498.64 |
| Dominion City | - | - | - | 19,029.59 | 33,453.92 | 2,773.19 | 55,256.70 |
| St. Jean Baptiste** | $198,128.74 | 369.20 | 48,473.89 | 287,960.25 | 121,587.67 | 15,690.80 | 672,210.55 |
| Morris** | 131,004.39 | 1,045.11 | 150,186.27 | 48,808.05 | 95,119.13 | 28,186.65 | 454,349.60 |
| Rosenort** | 10,209.81 | 4,369.11 | 23,293.09 | 178,840.29 | 48,289.32 | 6,675.69 | 271,677.31 |
| Brunkild** | - | 177,837.07 | 259,984.61 | 59,928.85 | 34,978.79 | 5,471.38 | 538,200.70 |
| St. Adolphe | - | 136,140.54 | 132,563.68 | 27,271.96 | 21,328.18 | 7,179.84 | 324,484.20 |
| Ste. Rose du Lac | - | - | - | 2,645.00 | 13,118.04 | 497,215.16 | 512,978.20 |
| Souris | - | - | - | - | - | 17,964.15 | 17,964.15 |
| TOTAL | $339,342.84 | $330,963.21 | $687,456.81 | $1,074,699.44 | $639,827.24 | $716,956.42 | $3,789,245.96 |

*During 1982-83 there were no funds expended because of the late signing of the agreement. The expenditures indicated are for those retroactive costs incurred by the Province prior to the agreement signing as allowed under clause 4(5) of the Agreement.

**The works required under the agreement are complete and the costs indicated are final costs.


APPENDIX A
Location of Communities
in the
Canada - Manitoba
Flood Protection
Projects Agreement.
NORTH
Ste. Rose
Du Lac
LAKE MANITOBA
LAKE WINNIPEG
ASSINIBOINE RIVER
Souris
SOURIS RIVER
St. Adolphe
Brunkild
Rosenort
Morris
St. Jean Baptiste
Lorellier
Dominion City
Emerson
Manitoba
United States

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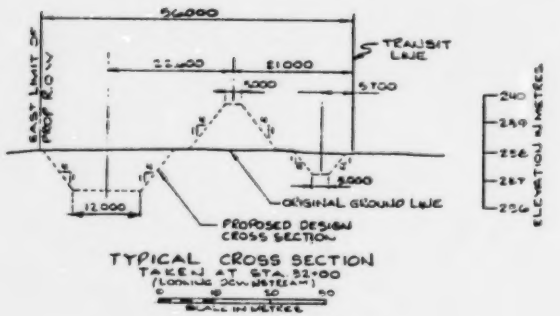


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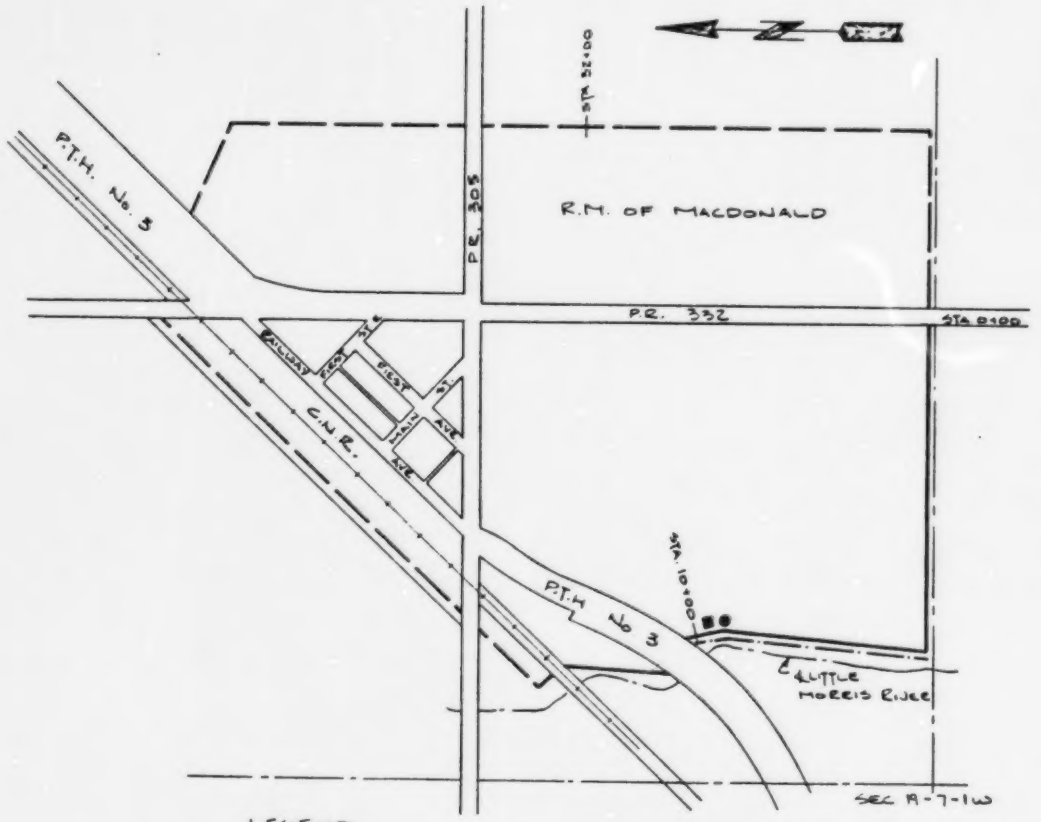


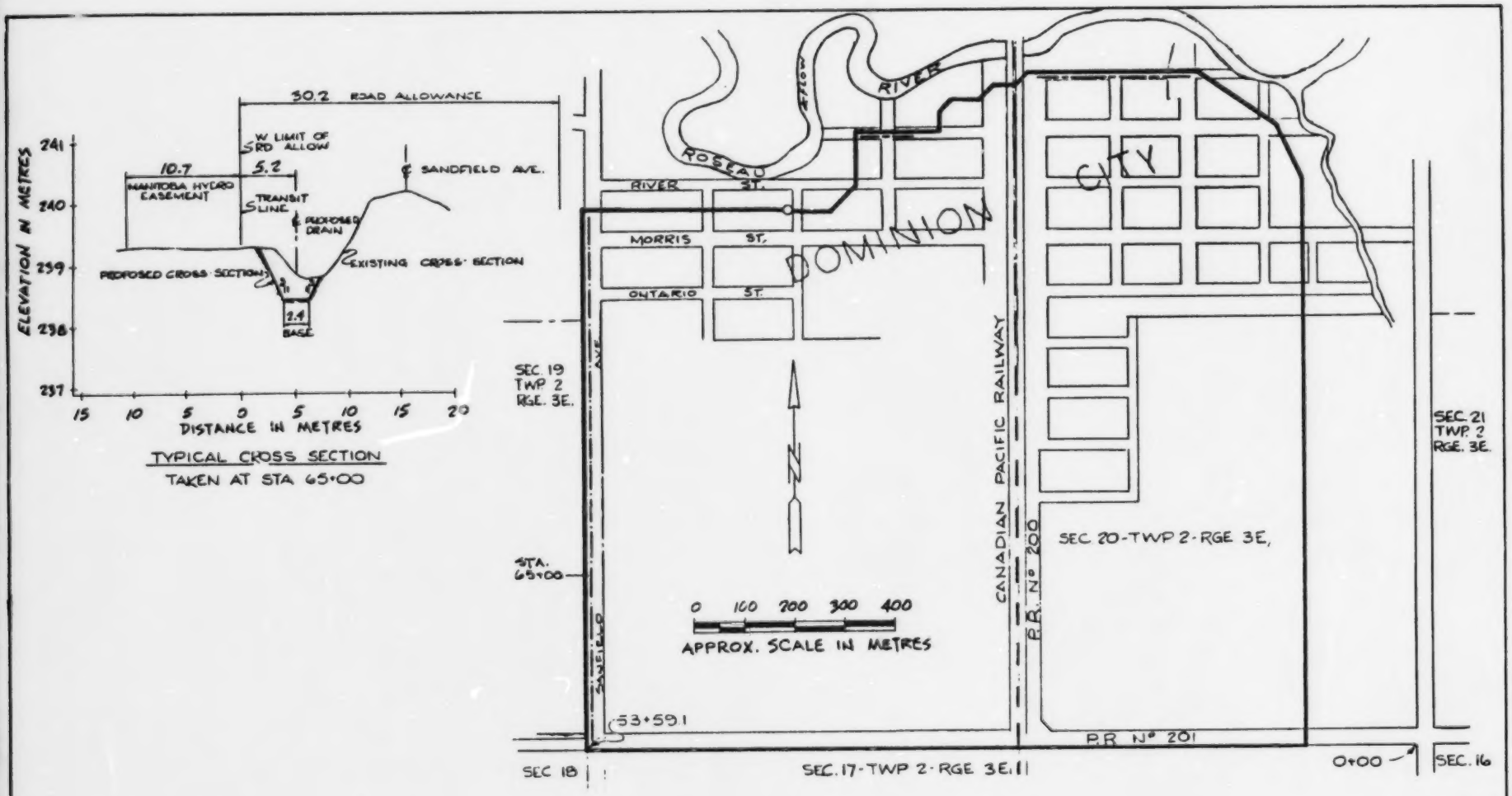

LEGEND

- LOCATION OF PROPOSED PERMANENT DYKING SYSTEM.
- PROPOSED PUMPING STATION.
- PROPOSED GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.
- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF BRUNKILD




## LEGEND

- —— LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- —— EXISTING DYKE REQUIRING NO IMPROVEMENTS
- O EXISTING GRAVITY OUTLET CHAMBER.
- —·— LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.
- — — LOCATION OF PROPOSED PAVED SURFACE ROADWAY.

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF DOMINION CITY

DRAWN C.E.G. CHECKED

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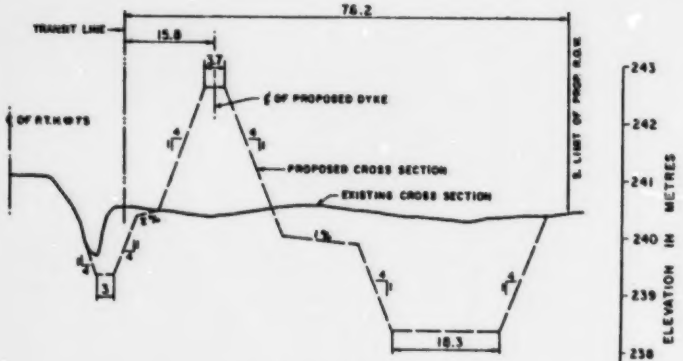


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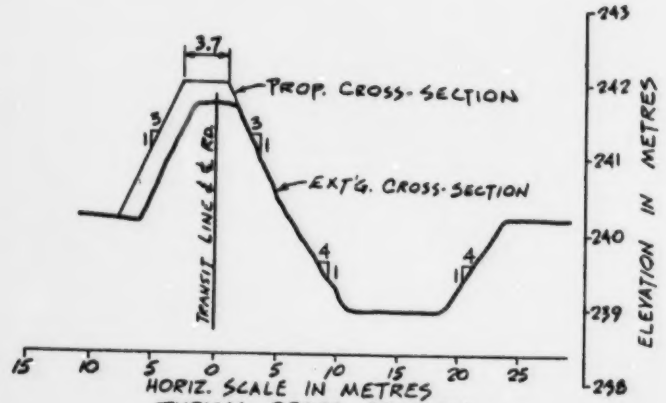


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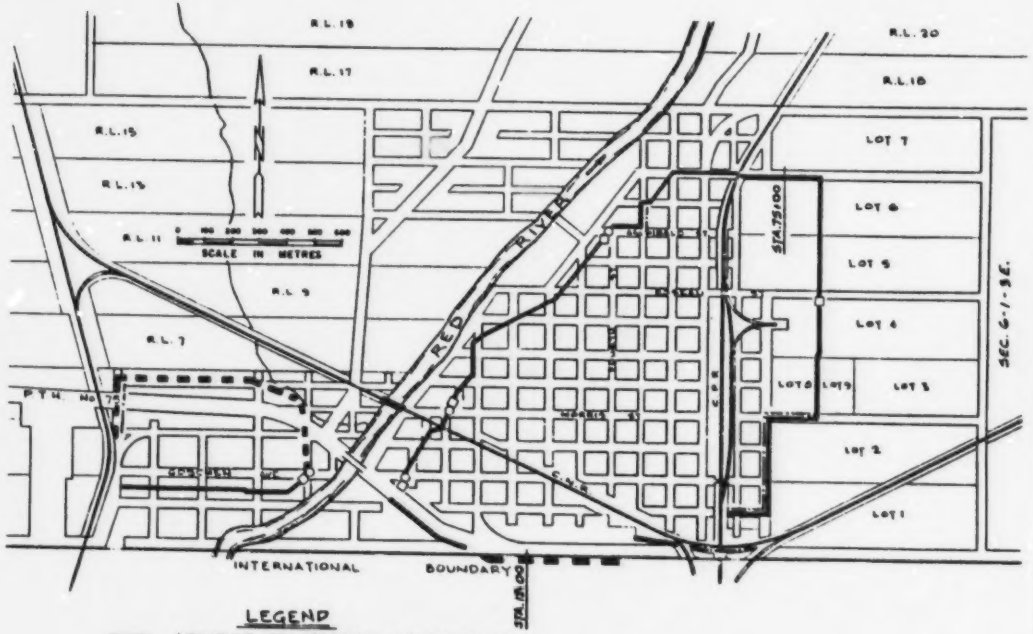


LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKES
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED | DRAWN F.R. | CHECKED | SUBMITTED

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF EMERSON

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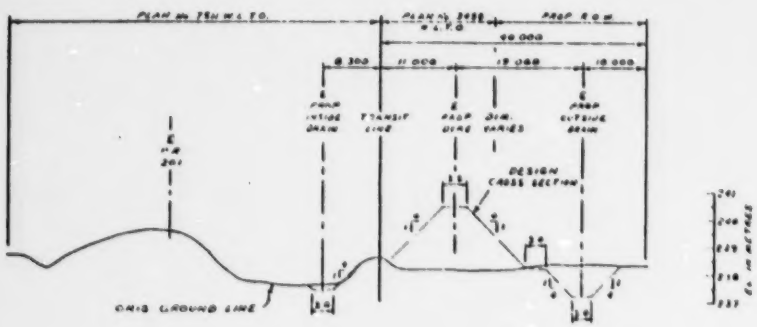


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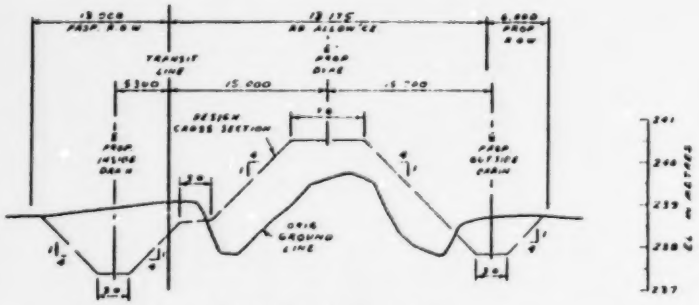


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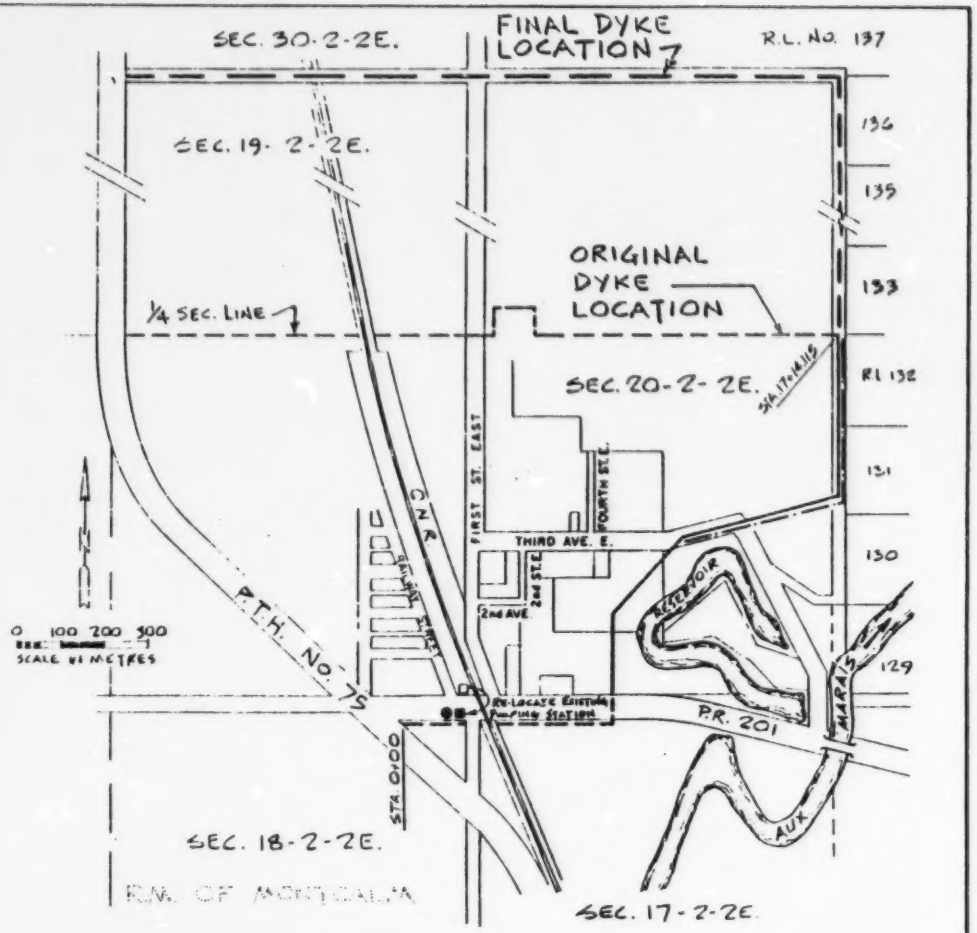



LEGEND

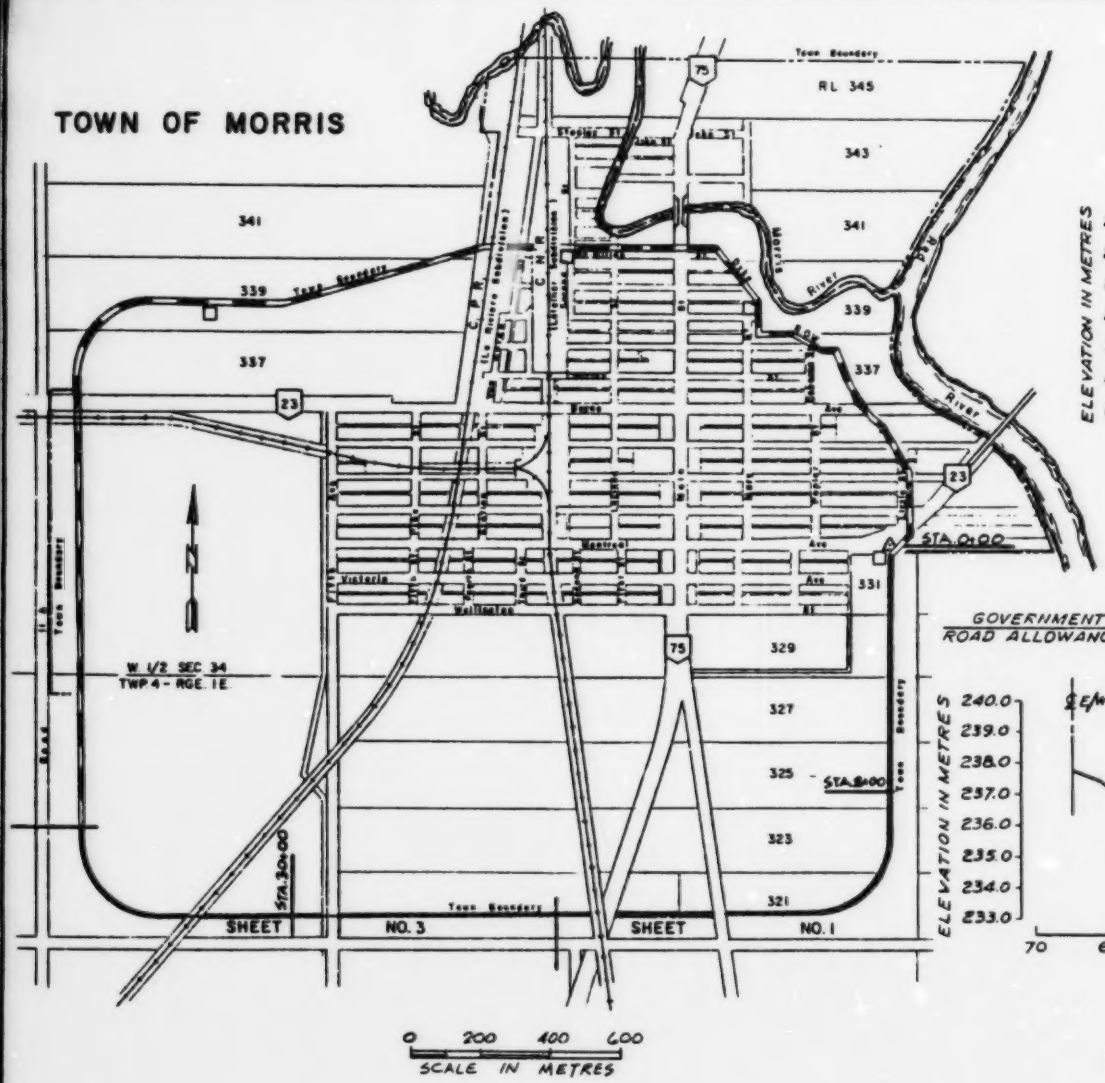
- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKING.
- EXISTING PUMPING STATION.
- RE-LOCATED PUMPING STATION.
- PROPOSED GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

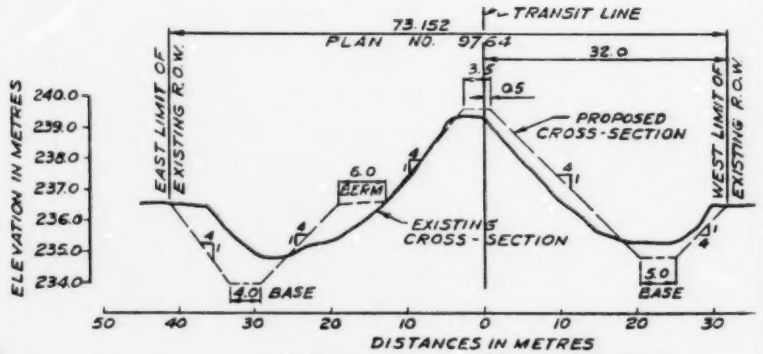
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF LETELLIER

F-1

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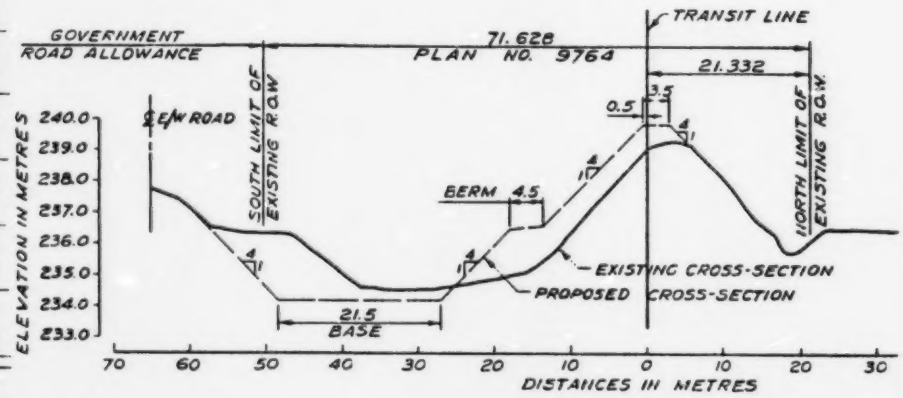


## TYPICAL CROSS-SECTION

(TAKEN AT STA 30+00)

## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
- EXISTING DYKES NOT REQUIRING IMPROVEMENT
- EXISTING PUMPING STATION

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

PREPARED F.R. SUBMITTED
CHECKED

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF MORRIS

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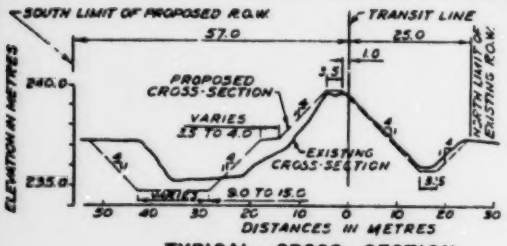


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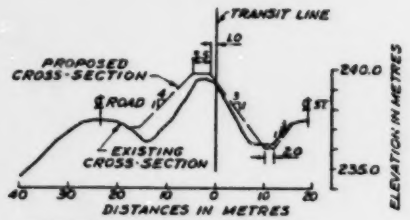


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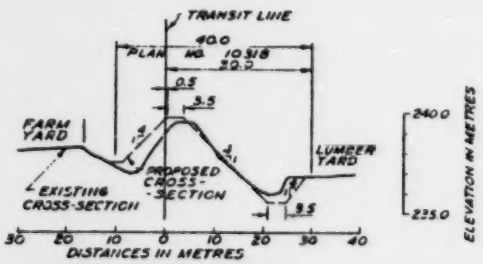


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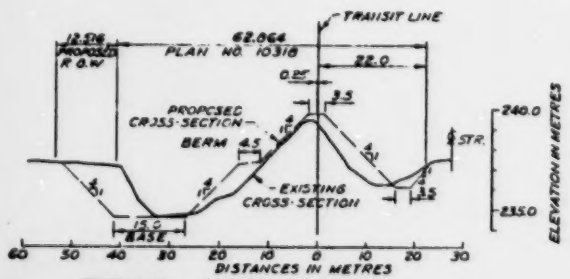


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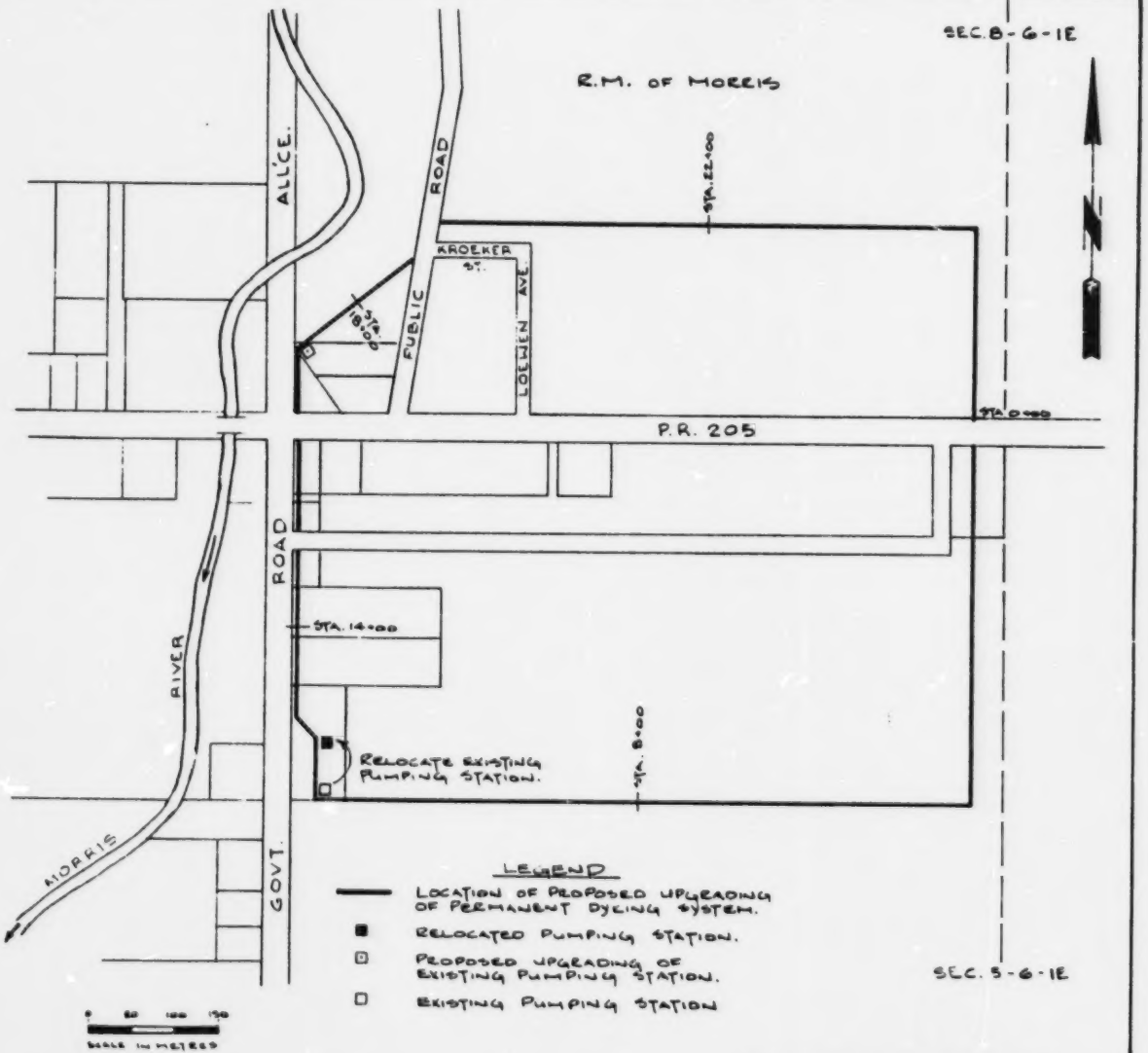
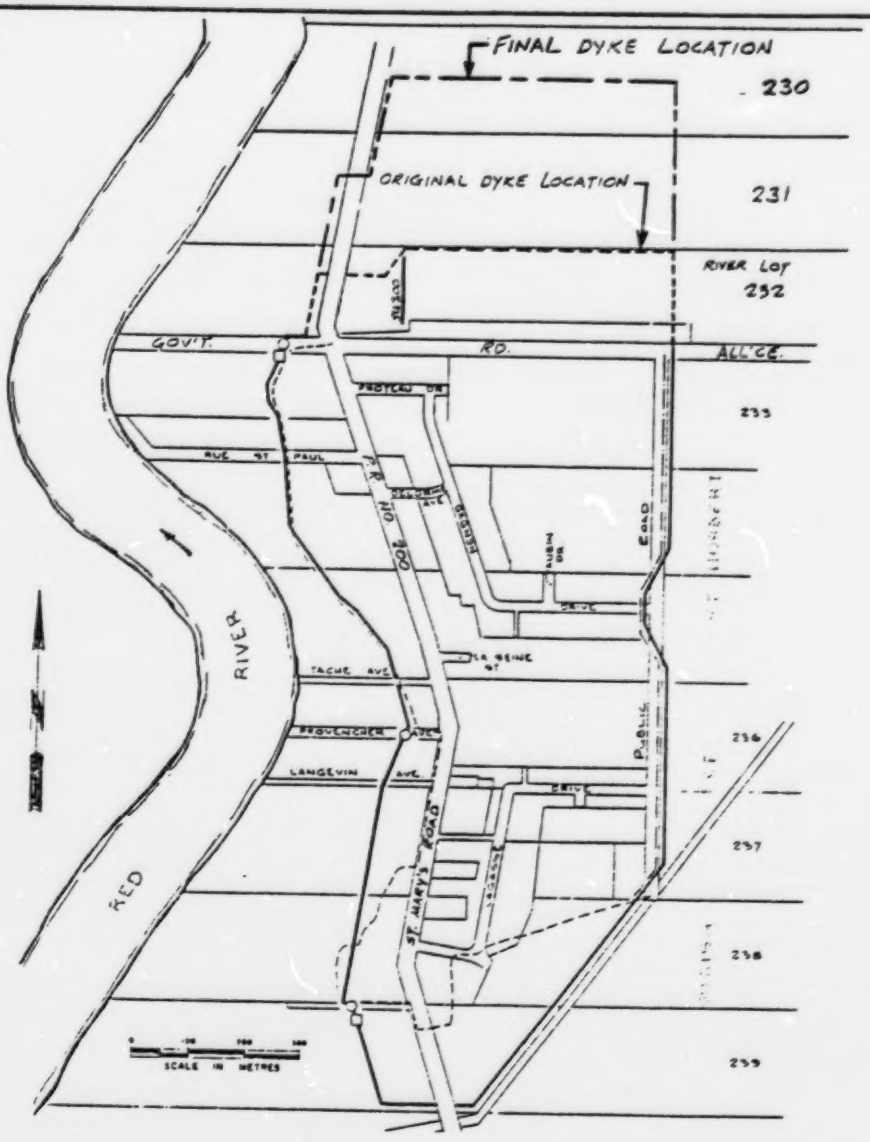
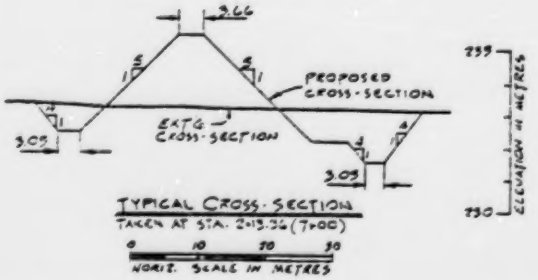



CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ROSENORT




LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM.
- LOCATION OF PROPOSED NEW DYKE.
- EXISTING PUMPING STATION.
- EXISTING GRAVITY OUTLET CHAMBER.
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY

CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

DRAWN F.B.R.

CHECKED

PREPARED

SUBMITTED

APPROVED

Manitoba Natural Resources
Water Resources

# LOCATION PLAN AND TYPICAL CROSS SECTION FOR VILLAGE OF ST. ADOLPHE

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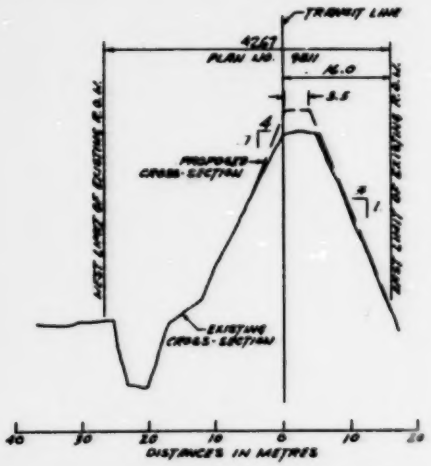
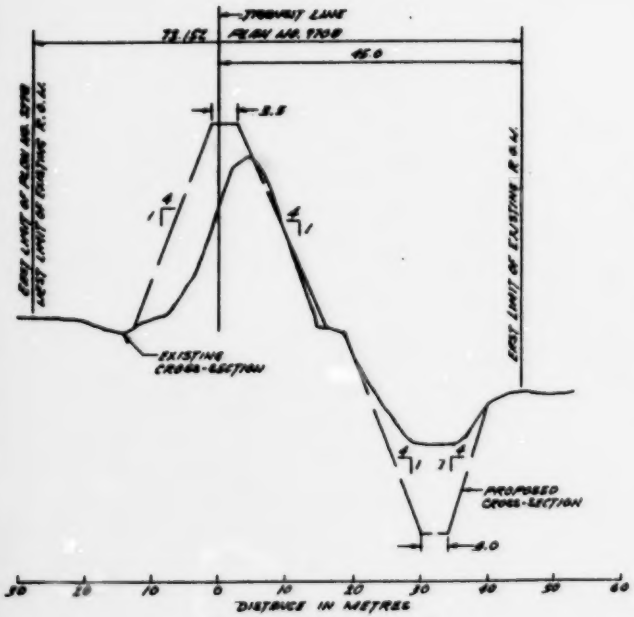
SHEET OF

FILE NO.




TYPICAL CROSS-SECTION

TAKEN AT STA. 5+60




TYPICAL CROSS-SECTION

TAKEN AT STA. 37+00

ELEVATION IN METRES

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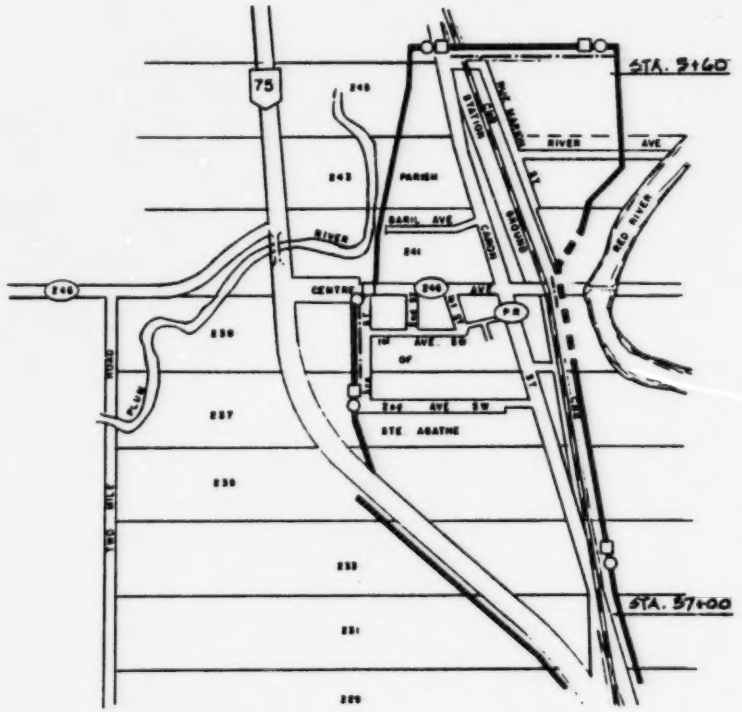



## LEGEND

- LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKE SYSTEM.
- LOCATION OF PROPOSED NEW DYKE
- EXISTING PUMPING STATION
- EXISTING GRAVITY OUTLET CHAMBER
- LOCATION OF PROPOSED GRAVEL SURFACE ROADWAY.

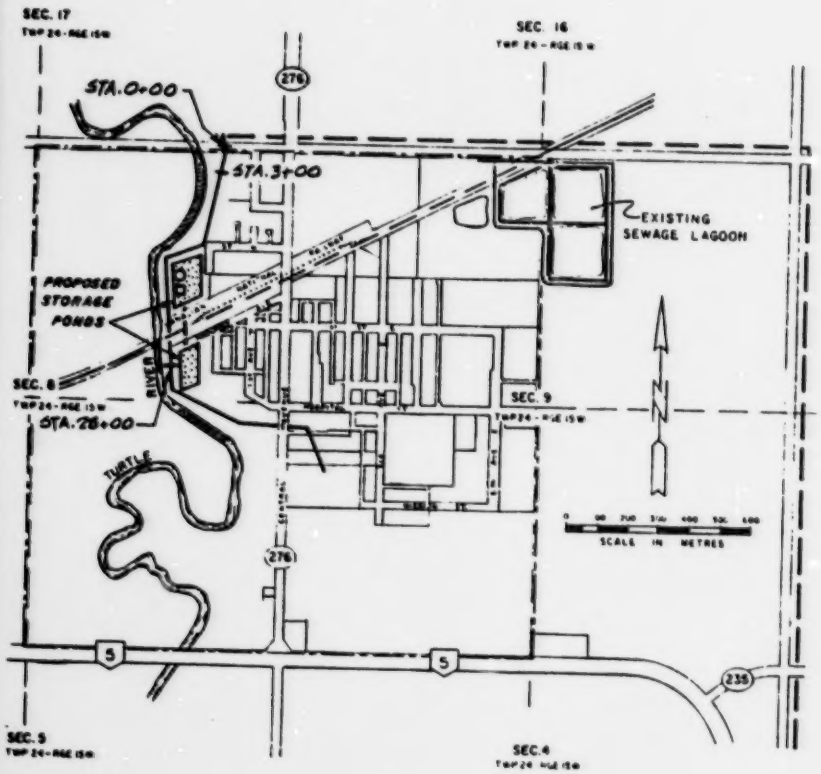
CANADA - MANITOBA FLOOD PROTECTION PROJECTS AGREEMENT

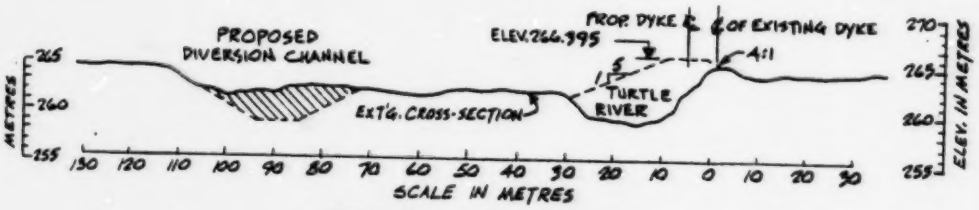
PROVINCE OF MANITOBA
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES BRANCH

# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF ST. JEAN BAPTISTE

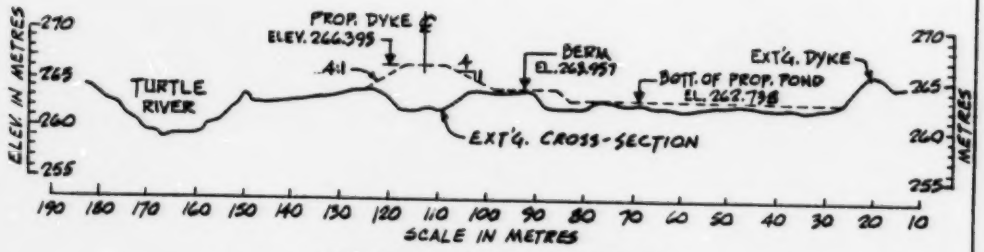
PREPARED | DESIGN F.R. | CHECKED | SUBMITTED | RECOMMENDED | SCALE AS SHOWN | DATE | SHEET OF | FILE NO

VILLAGE OF
STE. ROSE DU LAC




TYPICAL CROSS-SECTION
(TAKEN AT STA. 3+00)




TYPICAL CROSS-SECTION
(TAKEN AT STA. 28+00)

## LEGEND

——— – LOCATION OF PROPOSED UPGRADING OF PERMANENT DYKING SYSTEM
– – – – – LOCATION OF PROPOSED NEW DYKE
□ – PROPOSED PUMPING STATION
○ – PROPOSED GRAVITY OUTLET CHAMBER

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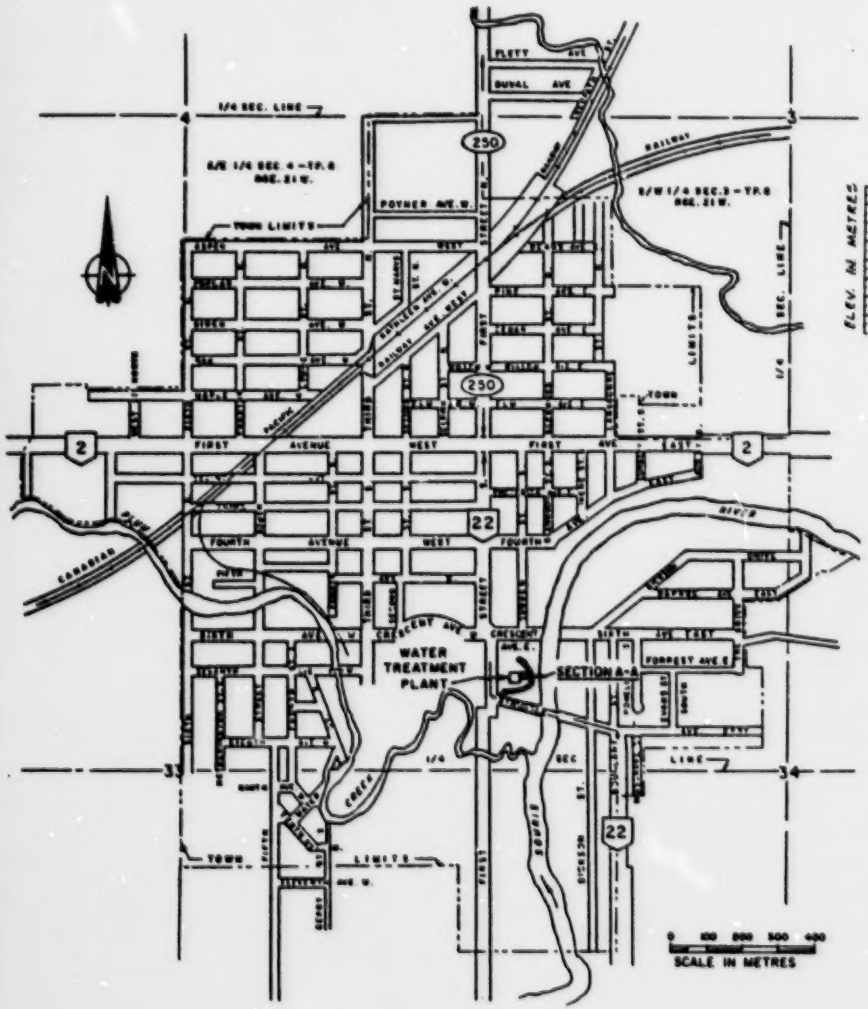
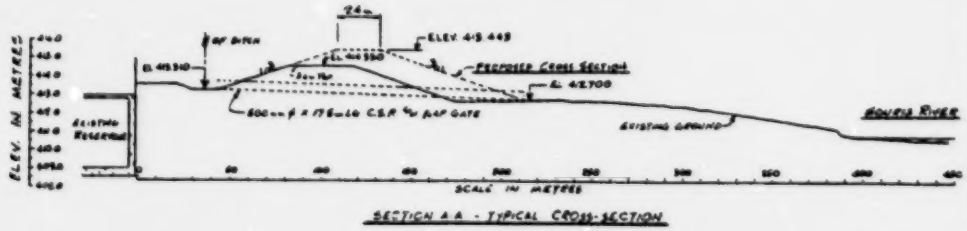
# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR VILLAGE OF STE. ROSE DU LAC




SECTION A-A - TYPICAL CROSS-SECTION

## LEGEND

——— - LOCATION OF PROPOSED UPGRADING OF EXISTING DYKE

PROVINCE OF MANITOBA
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# LOCATION PLAN AND TYPICAL CROSS SECTIONS FOR TOWN OF SOURIS